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CHURCHILL/NORTHERN SUPPLY CENTRE



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# *Churchill Northern Supply Centre*

There is no hesitation in calling Churchill the gateway to the central Arctic. Where else can one find a railhead, an airport with jet aircraft capability, and ocean port; all within 800 miles of important Arctic centres. The central Arctic is becoming "where the action is"; with mining and petroleum exploration in full swing and commercial developments of enormous potential in the offing. Therefore, Churchill has good claim to being called "The Way to Where It's At", and it has much to offer in the way of transportation and distribution facilities for the central Arctic.

The Port of Churchill Commission was set up in early 1970 to stimulate and develop two way trade through the Port. This Commission will in time give way to the Federally created and financed Churchill Port Authority but until then it is the focal point for information. It is the desire of the Commission to reduce Churchill's dependence on grain export trade and to encourage the growth of imports and coastal trade.

This effort has complemented the on-going programs of the Manitoba Department of Industry and Commerce. In line with this program the Department has worked closely with land, air and water carriers, all levels of government, various interest groups, and public and private shippers. This brochure has been produced with their assistance in order to provide interested parties with up-to-date and factual information on the many advantages which the Port of Churchill has to offer.

The interest of the Manitoba Government in Churchill is further exemplified by the \$10,000,000 Federal-Provincial Cost Sharing Agreement to revitalize this northern centre. The major items included in the plan are public housing, sewer and water, street paving and drainage, administrative, public works, library and recreation buildings, a secondary school, public works and public safety equipment, community improvement and a hospital-medical complex. These developments when completed will have a significant impact on the quality of life for Churchill residents. Furthermore, they will provide a firm base for development of Churchill as a growing service centre for the Hudson Bay area of Manitoba and the Northwest Territories.

MANITOBA DEPARTMENT OF INDUSTRY AND COMMERCE

Economic and Transportation Research Branch

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## *Introduction*

The Port of Churchill provides Manitoba with a unique distinction among the Prairie Provinces, direct access to the sea. While Henry Hudson discovered the Bay named after him in 1610, it was not until 1619 that the mouth of the Churchill River was found by the Danish expedition led by Jens Munck. This ill-fated expedition was forced to winter at Churchill where 62 of the 65 men died from scurvy or exposure. Captain Munck and the two other survivors managed to sail their sloop back to Europe, which surely must rank with the greatest feats of courage and seamanship. The remains of Munck's winter camp can still be seen at Churchill.

About one hundred years later, in 1717, Captain James Knight in the employ of the Hudson Bay Company built a wooden fort at the mouth of the Churchill River and named it "The Prince of Wales Fort". The wars between France and England caused the Company to replace the original fort with a stone fortress sufficient to withstand marauding naval expeditions. It was built on the promontory called Eskimo Point at the entrance to the harbor. The work was begun in 1731 and completed 40 years later in 1771 when 42 cannon were mounted on its ramparts. The length of time in building can really only be understood by actually viewing this massive stone bastion and considering the tools available in those years and the short building season each year.

The new "Fort Prince of Wales" was the originating point for many exploration and trading parties but probably the most famous was Samuel Hearne's overland trek in 1770-72 to the mouth of the Coppermine River and thence to Great Slave Lake and back to Churchill. This trip covered at least 2,000 miles as the crow flies over some of the most difficult terrain in the world and in the face of often extreme weather conditions. A glance at the map on page 13 will attest to the magnitude of his effort.





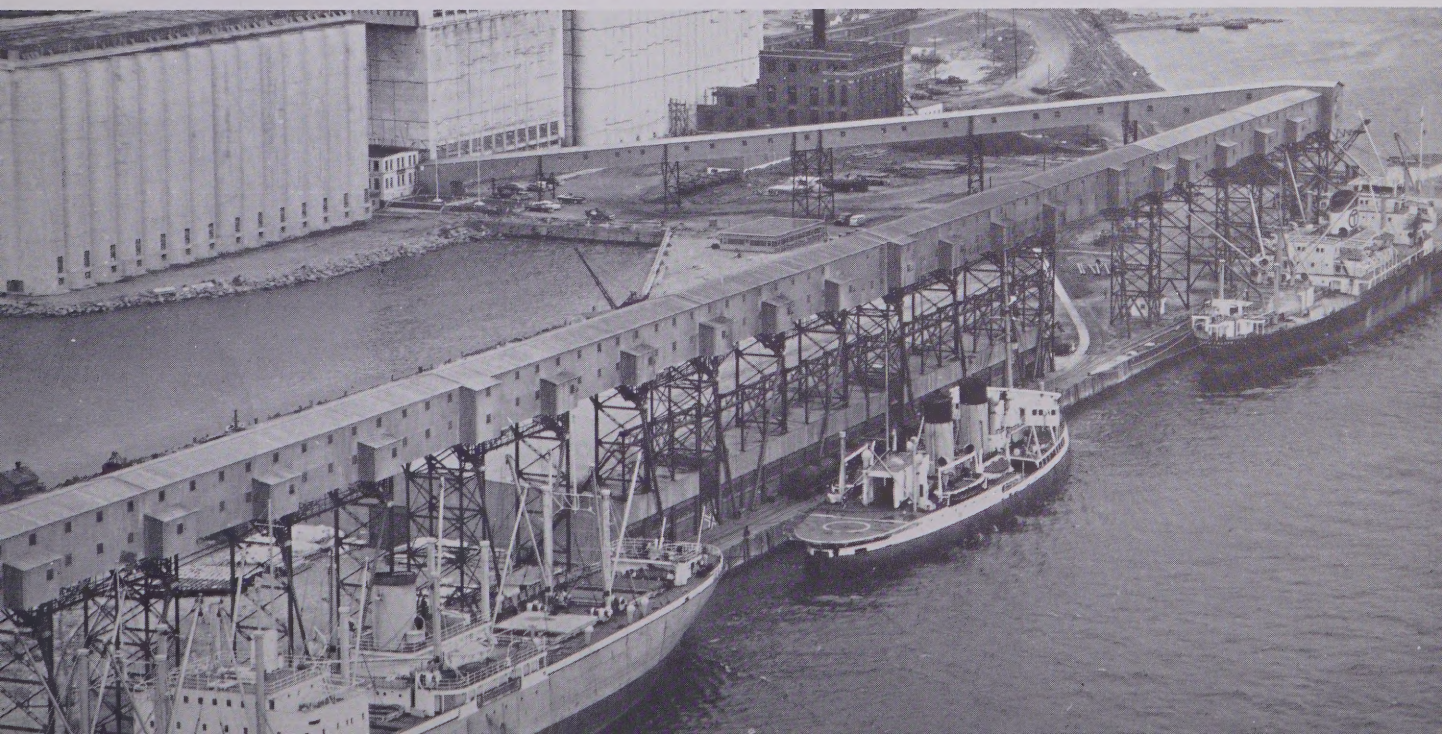
Militarily, Fort Prince of Wales did not have too outstanding a history as, in its first and only real test, it was captured by the French admiral, La Perouse in 1782. Samuel Hearne, then Governor, only had 39 men to defend the fort against the French admiral who could land 400 men. The fort was surrendered without firing a shot. La Perouse spiked its guns and tried to destroy the fort, but the massive walls were too solid and so he sailed away. Today, the ruins still stand in splendid isolation on Eskimo Point, one of the most interesting military remains on this continent.

Visitors to Churchill find these ruins fascinating as they do the excellent Eskimo museum in the town. Indian and Eskimo handicrafts each have a sales outlet and are very popular. Other attractions at Churchill range from the sophistication of rocket research to the natural beauty of the white beluga whales surfacing in the sparkling waters of Churchill harbor.

Each year the Hudson Bay Route Association (Box 1034, Saskatoon, Saskatchewan) and the Canadian National Railway cooperate in organizing Churchill excursions. These are personally conducted all expense tours which cover travel to and from Churchill by rail with visits to scenic and historic areas both in Churchill and along the rail line to Churchill. Casual visitors can find accommodation in one of three hotels in Churchill.

Churchill is an administrative, educational, medical and transportation centre for a wide area of Canada's north. Research is another major activity in the port as is evidenced by the rocket research range and the facilities for cold weather testing.

The modern 5,000,000 bushel capacity grain elevator located at Churchill handles 20 to 25 million bushels of export grain annually. This grain is shipped to Europe and forms the major part of the exports via this port. Nickel is also exported while imports cover a wide range of manufactured products from automobiles to liquor. This trade with overseas countries is very important to the economy of Churchill and, because of its prime location, the port is also becoming an ever more important re-supply centre for the central Arctic regions of Canada.





# *Inbound Freight*

## *Rail*

The Canadian National Railway provides the only land link to Churchill. Their track runs south from Churchill to the Nelson River and then south-west through the town of The Pas to the junction with the main east-west trunk line of the C.N.R. at Hudson Bay, Saskatchewan. The southern terminus of this line is The Pas which is 510 rail miles from Churchill. Rail line distances from the major Prairie centres to Churchill are as follows:

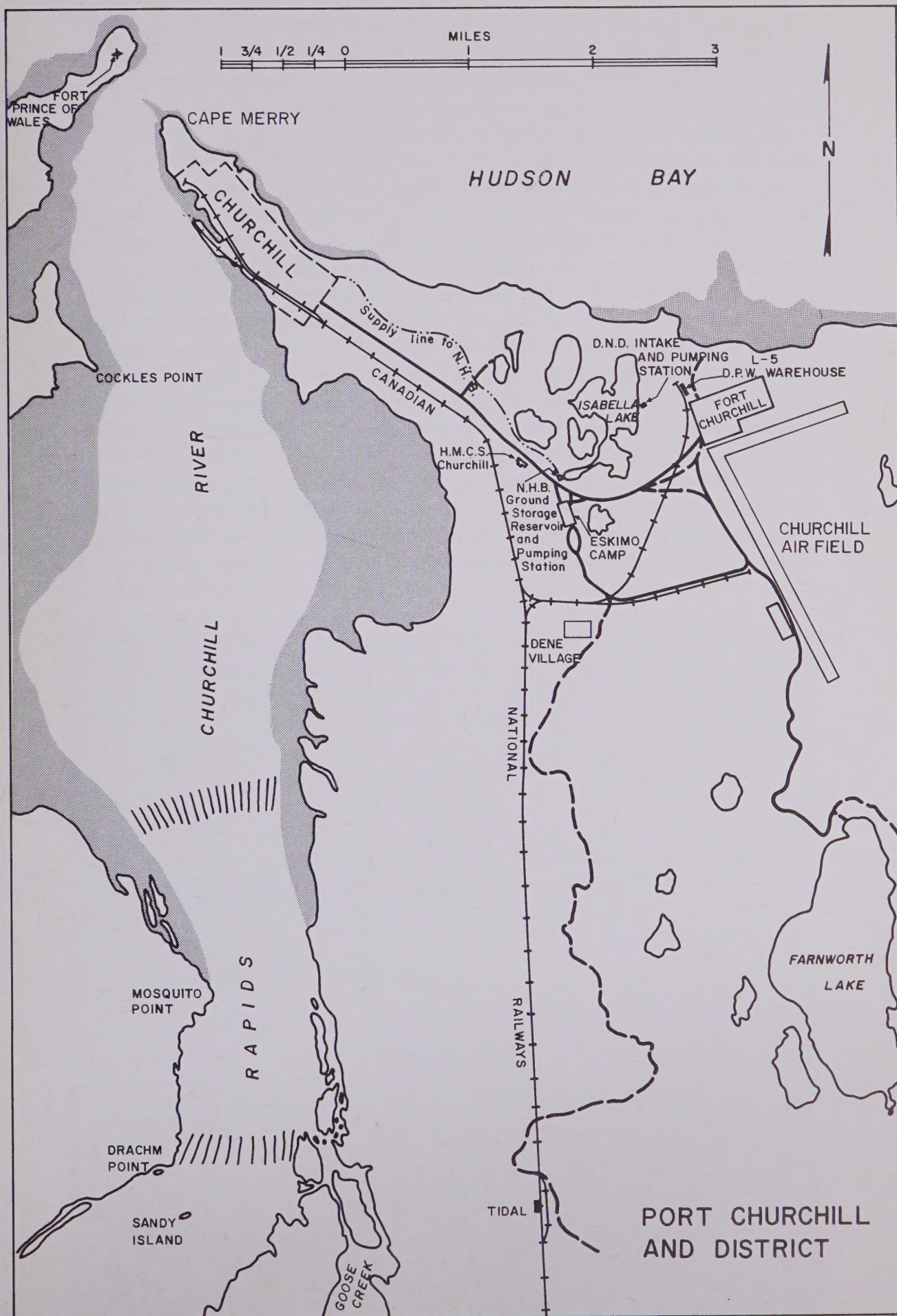
	Miles
Winnipeg	997
Regina	843
Saskatoon	814
Calgary	1,214
Edmonton	1,137

The line, originally known as the Hudson Bay Railway, went into operation in 1931 and became a part of the CN system in 1951. Built primarily to link the western wheat lands to the Port of Churchill, it has proven to be an invaluable transportation artery for northern Manitoba and the central Arctic region. Gross weights up to 90 tons on rail cars with four axles can be handled. However, an extensive track rehabilitation program is upgrading the line to handle weights up to 110 tons on four axle cars. This program has already advanced 333 miles from The Pas and is expected to be completed by 1974 or 1975.

The trackage at Churchill extends out onto the wharf where an additional six miles of tracks service all berths and the National Harbors Board warehouse, (maps, pages 5 and 8). In addition, the C.N.R. provides track service to the Department of Public Works warehouse near the airport, to many private warehouses in the town of Churchill and to the Imperial Oil, Shell, and Steelgas tank farms.

The railway provides weekly freight service to Churchill originating in Winnipeg. Express and passenger service is provided three days a week. This rail service allows customers to move freight by rail quickly and conveniently within 800 air or sea miles of all major central Arctic destinations.





PORT CHURCHILL  
AND DISTRICT



## *Air*

Churchill Airport is operated by the Ministry of Transport and has excellent facilities for receipt of cargo or passengers by air. The port lies 627 air miles north of Winnipeg and direct jet service covers this distance in one and a half hours. Where jet service to Thompson is combined with turbo-prop service from Thompson to Churchill, the elapsed time runs to three and a half hours.

The Churchill airport has one north-south runway and one east-west runway (see map page 11.) The north-south runway is 9,200 feet long by 160 feet wide and asphalt surfaced while the other runway is gravelled over two-thirds of its 6,081 feet with the remainder asphalt. Instrument landing equipment is installed at the airport and this in conjunction with the long runways allows it to handle virtually all types of aircraft including large jets. The airport provides 80/87, 100/130, 115/145, and JP4 fuels and 100 and 120 oil plus de-icing and anti-icing fluids. High pressure refueling and electric starting can also be carried out as can minor repairs and servicing. Weather reports and charts are on display and briefing is available for the northern Manitoba and Keewatin district weather.

Transair Ltd. is the major air carrier utilizing the Churchill airport which is its only permanent base facility outside of its major facilities in Winnipeg. This regional airline provides daily flight service between Winnipeg and Churchill with stop-offs at Thompson and/or Gillam. Twice a week during heavy traffic periods this service is via a Boeing 737 jet while the remainder of the flights are by jet to Thompson connecting with a turbo-prop aircraft to Churchill. Charter air services into Churchill, both by fixed wing aircraft and by helicopters are primarily provided by Transair, its subsidiary Midwest Airlines, and Lambair. Lambair also operates a float plane base on nearby Farnworth Lake (see map, page 5).



## Sea

Freight inbound to Churchill can also be brought by sea. Churchill is 2,575 miles from Halifax, 2,850 statute miles by sea from Montreal, and only 3,380 miles from Liverpool. Ice conditions in Hudson Bay and Hudson Strait restrict the season of navigation to roughly the period from July 20th to October 20th but this is ample time for receiving goods by sea.

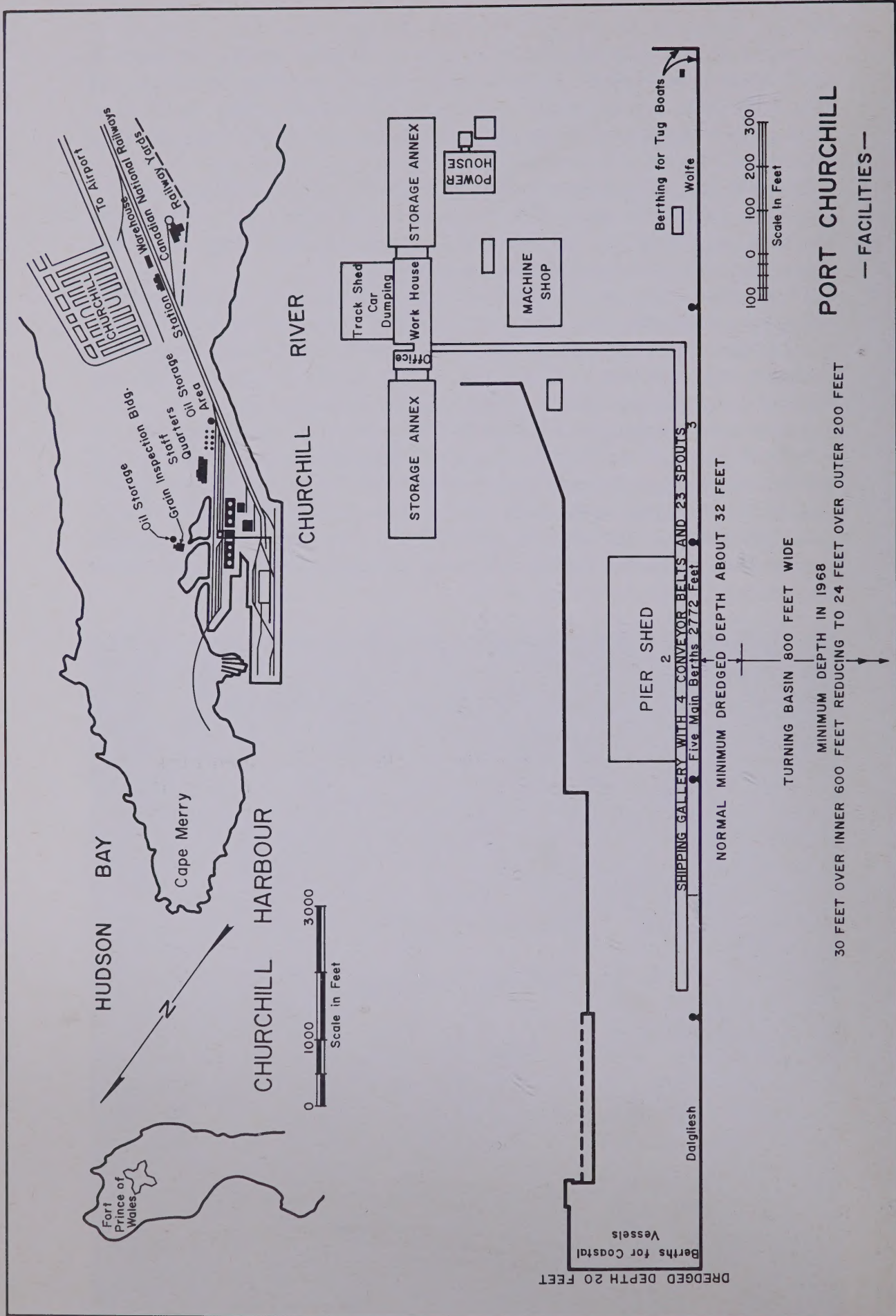
The port has a fine harbor protected from the open sea (see map page 5). There is a 3,065 foot wharf with five deep sea berths and one coastal berth. The deep sea berths and the turning basin have a minimum depth of 30 feet at low tide with tides running from 11 to 15 feet.

Two harbor tugs are available, the larger of which is a modern, ocean going, ice reinforced, twin screw, 1,520 horse power, diesel powered tug. Night navigation facilities are also provided. A fully equipped machine shop is available and unloading is facilitated by use of the 35 ton and 15 ton capacity crawler cranes and the 10 ton capacity floating crane.

The sea lift advantages of Churchill have made it the staging area for petroleum products destined for the north. Such products, notably heating oil and gasoline, are brought in by tanker from Venezuela or from eastern Canada to the large tank farm of the Department of Public Works in Churchill which is operated by Imperial Oil on a contract basis. Smaller tankers then carry the fuel to the northern settlements on the shores of Hudson Bay.







# PORT CHURCHILL

— FACILITIES —



## *Storage and Handling at Churchill*

The largest warehouse in the Churchill area is the Department of Public Works warehouse, L-5 by name, located five miles from the harbor near the airport (see maps pages 5 and 11). This warehouse covers 91,390 square feet, including service areas and is sub-divided into several separate fully heated areas. A rail spur, with side by side tracks, serves L-5 and the receiving doors are equipped with covered bays to facilitate unloading during the winter months. The truck loading ramps are located underground and so are not bothered by inclement weather.

The Department of Public Works uses part of this warehouse and leases other areas to such institutions as the Hudson Bay Company and the Government of the Northwest Territories. Each leasee is provided with an enclosed area to assure the security of goods stored there. Space in L-5 is available for leasing.

The second largest warehouse is the one operated by the National Harbors Board on the wharf at the Port (see map page 8). This warehouse covers 80,000 square feet and is unheated. There is also an outside storage area of about 250,000 square feet. Both the inside and outside storage facilities are located right on the wharf and are served by a rail spur. National Harbors Board storage rates per ton weight on measurement as manifested are:

- (a) Transit Shed Space — 4 cents/per day or part day.  
Open Space — 50 cents/per month or part month.
- (b) Transit Shed Space — 75 cents/per month or part month.  
Open Space — 25 cents/per month or part month.

NOTE: (a) Rates applicable during shipping season.  
(b) Minimum rates during closed season.

The National Harbors Board facilities are the main ones used for sea lift cargo. L-5 on the other hand is well situated as regards the airport and, because it is heated, is suited to the storing of goods during the winter months.

There are other buildings at the airport site which could also be used for storage. Transair and Lambair each own hangers which they use as transfer warehouses and several buildings in the former Strategic Air Command complex at the airport could be leased from the Ministry of Transport to provide storage areas. This complex is located between the runways at the airport and some of the buildings are being used by Government Departments for storage. Two former S.A.C. nose hangars in this complex, (Q35 and Q36 on the map on page 11), each having a floor area of about 12,000 square feet and equipped with overhead cranes, have been used previously for assembly storage and could be made available again for leasing depending on M.O.T. requirements.



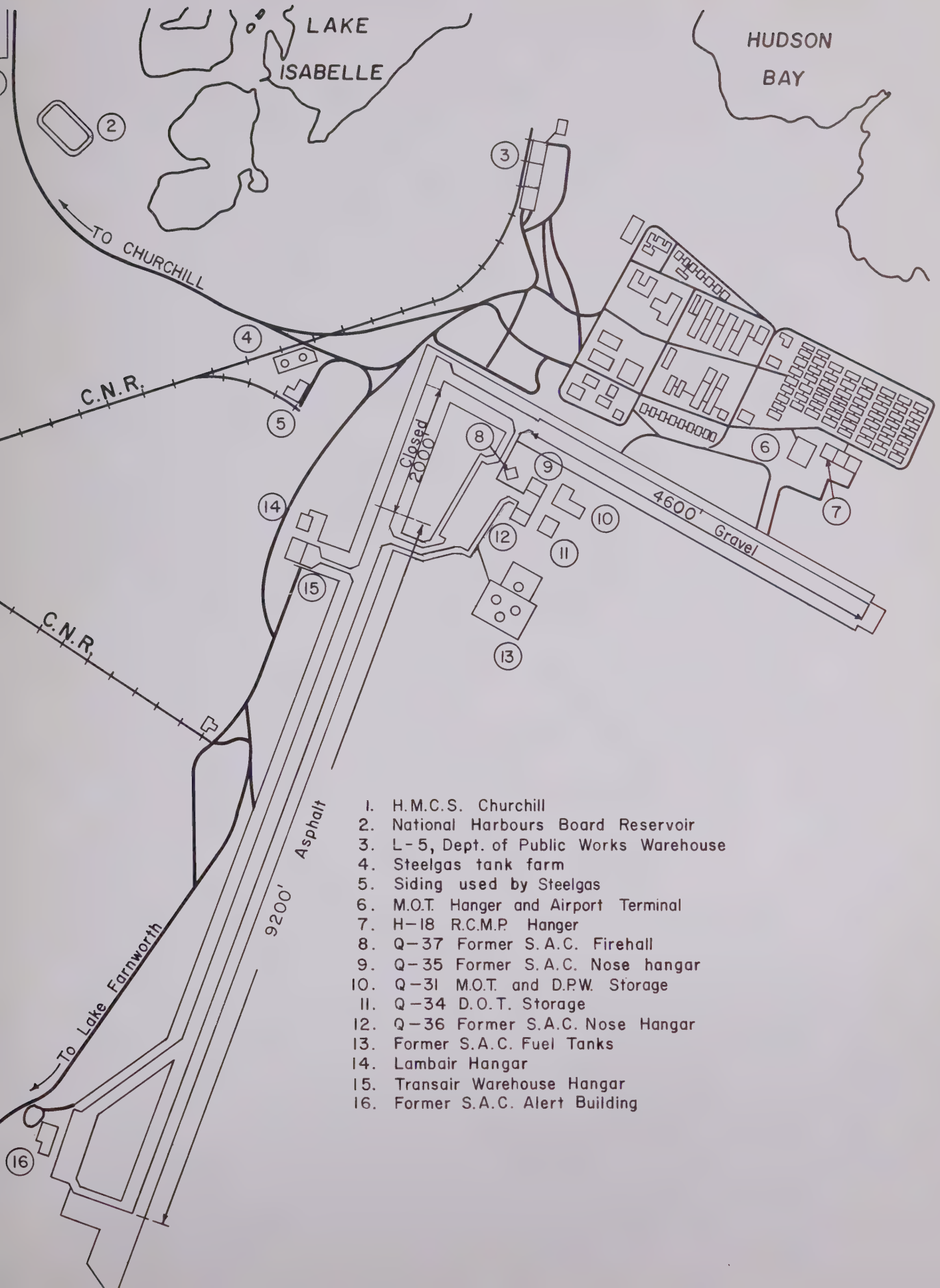
Storage facilities within about one mile of the wharf are available in the town of Churchill. The Canadian National Railway operates a transfer freight shed at its station and other heated public storage facilities within the townsite include Arthur A. Anderson Moving and Storage, 3,000 square feet and Churchill Enterprises, 2,800 square feet.

Freight handling services are available from several firms. Local trucking firms such as Anderson Moving and Storage double as shipping agents. Wolff Stevedoring handles most of the general cargo over the wharf and maintains a number of fork lifts, tow motors and cargo wagons for this purpose. The National Harbors Board also provides handling facilities in the form of dock cranes.

Both Imperial Oil Ltd. and Shell Canada Ltd. operate tank farms for bulk fuel at Churchill. All major types of gasoline, diesel fuel, heating oil, and jet fuel are handled. Facilities for drumming fuel are also available here. A propane gas storage area is operated near the airport by Steelgas.

The major gasoline and oil storage facilities, totalling 14 million gallons, are owned by the Federal Department of Public Works and operated under contract by Imperial Oil Limited. In addition, Imperial Oil has its own Marine Terminal depot nearby, serviced by rail and sea. The Shell Oil bulk storage depot and the Steelgas complex are accessible by rail only. A pipeline for fuel oil runs from the Imperial Oil tank farm out to Fort Churchill. An extension of this line to the airport permits the loading of fuel oil directly to aircraft at a rate of 4,000 gallons per hour.







## *Outbound Freight*

Cargo moves out of Churchill by rail, air and sea. Rail movement out of Churchill is, by necessity, southbound as the port is the northern terminus of the rail line. Therefore, such movement largely reflects the carriage of imports from overseas although there is also some southbound cargo originating in the settlements of the central Arctic and Arctic Quebec.

### *Sea*

Water movement of cargo north and east of Churchill is restricted by ice conditions in the Bay to a period from the middle of July to the middle of October. At present, re-supply vessels do not overwinter in the Bay. If a vessel did winter at Churchill then the season would be lengthened by at least two weeks at either end of the present season.

Churchill has a definite locational advantage with regard to sea movement in the Hudson Bay and Foxe Basin area. its railhead and deep water port are unique in this region.

The Port of Churchill, with its minimum harbor depth of 30 feet, can handle vessels of up to 35,000 tons deadweight subject to tides. Smaller vessels can then be used to reach the northern outports which generally have shallow beaches to unload cargo onto.

Some of the major central Arctic and Arctic Quebec ports and their approximate distances in statute miles by sea from Churchill and Montreal are:

Port	Sea Distance from Churchill	Sea Distance from Montreal
Eskimo Point	170	2,850
Rankin Inlet	290	2,730
Chesterfield Inlet	340	2,680
Baker Lake	470	2,860
Repulse Bay	590	2,550
Coral Harbor	510	2,430
Hall Beach	890	2,660
Igloolik	960	2,730
Cape Dorset	700	2,220
Ivugivik	610	2,250
Port Harrison	660	2,580

The shorter water haul from Churchill means less chance of damage and could mean savings in packaging and crating.

At present the Hudson Bay Company is the only private company offering public transportation by sea to central Arctic ports out of Churchill. Two sailings are scheduled for each shipping season and about 150 tons of private cargo can be handled per trip.

The Government of Canada through the Department of Transport is heavily engaged in Arctic re-supply operations by sea lift. The Department uses Churchill as a staging area for handling some of its cargo. Their vessels will also carry private freight to Arctic outposts at standard D.O.T. rates, if space is available. Several firms involved in mineral and petroleum exploration in the Hudson Bay area re-supply their operations with either their own or chartered vessels.



The Federal Ministry of Transport is responsible for the maintenance of navigational aids and the provision of services for the support of shipping in ice throughout the Canadian Arctic. With regard to Hudson Strait, Hudson Bay and Foxe Basin, the Ministry stands ready to provide ice breaker escort service near the limits of the present shipping season and beyond if necessary. All legitimate requests for such service will be met subject to the availability of ice-breaking vessels and the judgement of the Ministry that the vessels concerned are capable of navigating in the ice conditions that would be encountered.

#### *Air*

Unlike the sea lift, air cargo and passenger services are not restricted by ice conditions. In fact ice formation in the winter months actually aids air re-supply operations to isolated settlements. The ice provides a safe airstrip with no length or weight restrictions. This means that much larger aircraft such as Hercules and Bristol Transports can be used even to the smaller settlements.

The air facilities at Churchill allow year round scheduled air services to land and/or ice locked northern settlements. Charter flights are readily available at Churchill. As shown by the map on page 14, Churchill enjoys a definite locational advantage with regard to the central Arctic. Its railhead and major seaport are within 800 air miles of every outpost in the Keewatin district and is also the closest railhead to many points in the high Arctic.

Transair Limited is the primary carrier operating out of Churchill. It provides scheduled service out of its base into the following Arctic points:

	Air Route Miles from Churchill
Eskimo Point	162
Whale Cove	250
Rankin Inlet	296
Chesterfield Inlet	353
Baker Lake	394
Coral Harbor	515
Repulse Bay	591

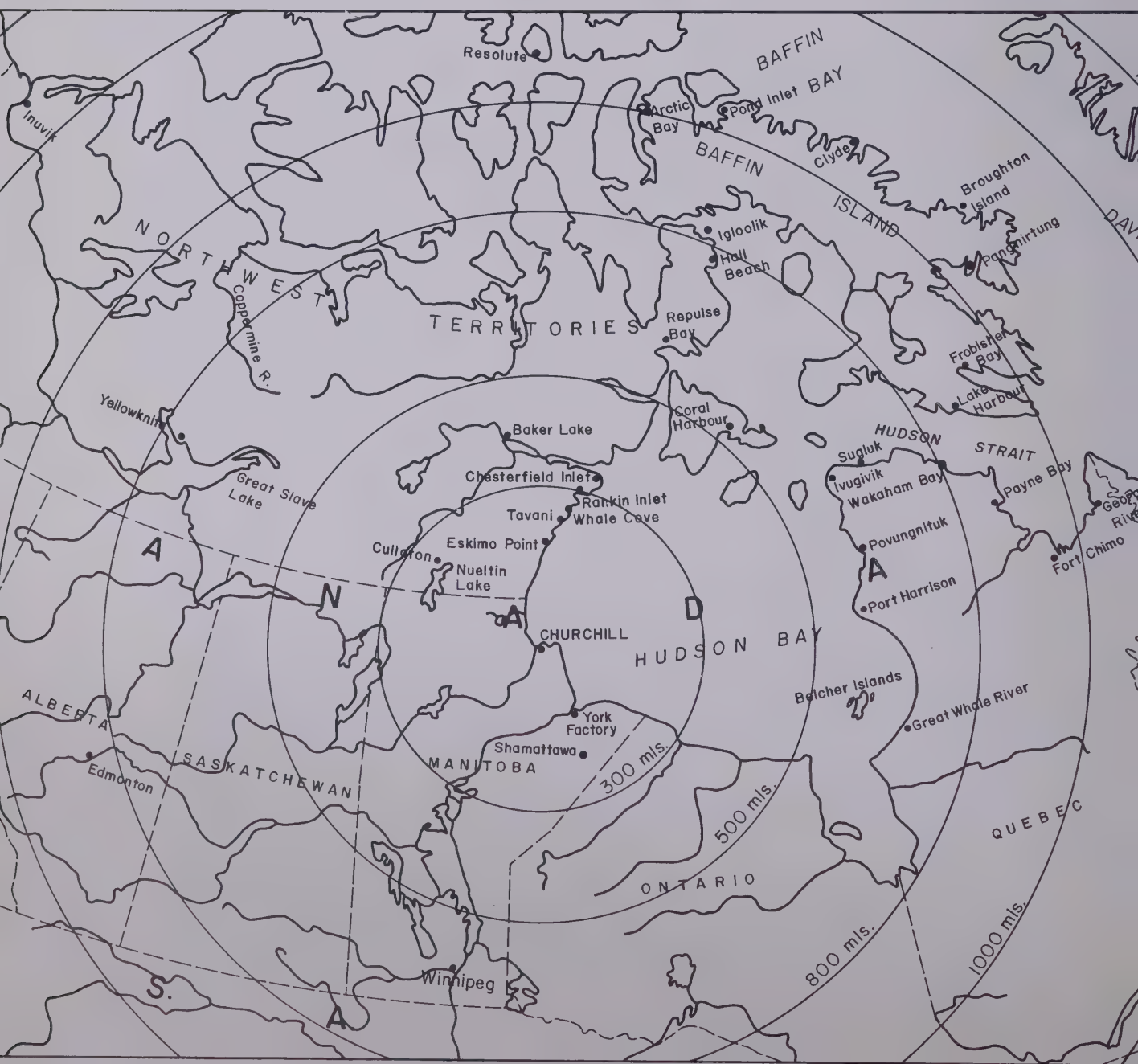
There is a wide variety of aircraft available from Transair at its Churchill base including a Piper Aztec, a DC-3 (equipped on wheels or wheel-skis), DHC-6 Twin Otter, H.S. 748 turbo prop, H.S. Argosy 222 and Boeing 737. In addition, amphibious Canso Aircraft are available in the summer. The exact payload and performance of each of these specific aircraft varies according to the distance to be covered, the weather, and runway conditions at the destination.

The Transair fleet is designed to provide a total transport capacity for the customer, with aircraft varying from 5 to 115 passenger capability or from a few pounds to 15 tons of cargo capability. The short take-off and landing ability of the DHC-6 Twin Otter is well known and for further restricted landing area work, Midwest Airlines' Helicopter Division maintains 14 helicopters ranging from Bell G-4s, to a large Bell 205, with 14 passenger or 5,000 lb. lift ability.



Transair operates from the Ministry of Transport hangar facilities at Churchill where aircraft servicing, maintenance and storage facilities are located. In addition, a passenger and freight terminal are located there, as well as offices and shops for operational support. A 16,200 square foot hangar is located nearby and is used for in-transit cargo storage. This latter building was constructed at the time that the DEWLine was being built. Transair's facilities at Churchill, including staff houses and equipment, represent an investment of approximately \$2 million and a permanent staff in excess of 29 people are employed there.

Under contract to the United States Air Force, Transair Limited operates the supplementary vertical re-supply flights for the DEWLine. The main flights operate into the Canadian high Arctic via Churchill from Winnipeg and the Boeing 737 jet aircraft is used for this work.





The other licensed air carrier providing air services out of Churchill is Lambair. This carrier's operation maintains the spirit and enterprise of its legendary founder, the late Tom Lamb. His dedication to the north and his abilities as a bush pilot were the cornerstone upon which the still developing Lambair was built. Their operations are particularly directed toward the north and they have acquired a fleet of aircraft well suited to this purpose. The fleet operating out of the Churchill base consists of two DHC-3 Otters, a DHC-6 Twin Otter, a Twin Islander, an Aztec and a Bristol freighter. Two Bell 47G-4A helicopters round out their Churchill equipment. Wheel, float and ski configurations are provided as needed. Their fleet is being upgraded rapidly to turbine powered aircraft which are ideal for Arctic and sub-Arctic operations. Lambairs' hangar at the Churchill airport covers 4,500 square feet and is used for cargo assembly when required.

## *Churchill for Re-Supply*

Without question Churchill has facilities and an ideal location to be an intermodal transportation centre for the Arctic. It is already providing such services to many companies and organizations involved in this area. It can help you as well. CHURCHILL: THE NORTHERN SUPPLY CENTRE!

FOR FURTHER INFORMATION PLEASE CONTACT ANY OF THE FOLLOWING:

The Port of Churchill Commission  
Ministry of Transport  
Transair Ltd.  
National Harbours Board  
Port Churchill Chamber of Commerce  
Lambair  
Canadian National Railways  
Montreal Shipping  
Wolff Stevedoring  
Hudson Bay Route Association

or

Manitoba Dept. of Industry & Commerce

Box 275, Churchill, Manitoba  
Rm. 212 Hangar H7, Ft. Churchill  
Winnipeg International Airport  
Churchill, Manitoba  
Churchill, Manitoba  
The Pas, Manitoba  
Broadway & Main, Winnipeg  
Churchill, Man. or Montreal, PQ  
Churchill, Man. or Montreal, PQ  
Box 1034, Saskatoon, Sask.

Norquay Building, Winnipeg, Man.

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Manitoba Department of Industry and Commerce

November 1971

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Deputy Minister

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